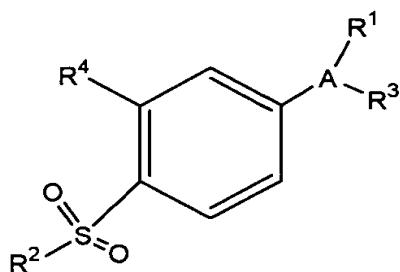


What is claimed is:

1. A method for treating, preventing or reducing the risk of developing a neoplasia disorder in a mammal in need thereof, comprising administering to the mammal in a combination therapy an amount of a DNA topoisomerase I inhibiting agent and an amount of a selective COX-2 inhibiting agent wherein the amount of the DNA topoisomerase I inhibiting agent and the selective COX-2 inhibiting agent together make a neoplasia disorder effective amount.
- 10 2. The method of claim 1 wherein the DNA topoisomerase I inhibiting agent is selected from the group consisting of irinotecan; irinotecan hydrochloride; camptothecin; 9-aminocamptothecin; 9-nitrocamptothecin; 9-chloro-10-hydroxy camptothecin; topotecan; topotecan hydrochloride; luritotecan; luritotecan dihydrochloride; luritotecan (liposomal); homosilatecans; 6,8-dibromo-2-methyl-3-[2-(D-xylopyranosylamino)phenyl]-4(3H)-quinazolinone; 2-cyano-3-(3,4-dihydroxyphenyl)-N-(phenylmethyl)-(2E)-2-propenamide; 2-cyano-3-(3,4-dihydroxyphenyl)-N-(3-hydroxyphenylpropyl)-(E)-2-propenamide; 5H-indolo[2,3-a]pyrrolo[3,4-c]carbazole-5,7(6H)-dione, 12-.beta.-D-glucopyranosyl-12,13-dihydro-2,10-dihydroxy-6-[[2-hydroxy-1-(hydroxymethyl)ethyl]amino]-; 4-acridinecarboxamide, N-[2-(dimethylamino)ethyl]-, dihydrochloride; and 4-acridinecarboxamide, N-[2-(dimethylamino)ethyl]-.
- 15 3. The method of claim 2 wherein the DNA topoisomerase I inhibiting agent is selected from the group consisting of irinotecan, irinotecan hydrochloride, camptothecin, 9-aminocamptothecin, 9-nitrocamptothecin, 9-chloro-10-hydroxy camptothecin, topotecan, topotecan hydrochloride, luritotecan, luritotecan dihydrochloride, luritotecan (liposomal), and homosilatecans.
- 20 30 4. The method of claim 1 wherein the selective COX-2 inhibiting agent is selected from compounds of Formula 1:



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or a pharmaceutically-acceptable salt or prodrug thereof,
wherein

5 A is a 5- or 6-member ring substituent selected from the group consisting of heterocyclyl and carbocyclyl, wherein A is optionally substituted with one or more radicals selected from the group consisting of hydroxy, alkyl, halo, oxo, and alkoxy;

10 R¹ is selected from the group consisting of cyclohexyl, pyridinyl, and phenyl, wherein R¹ is optionally substituted with one or more radicals selected from the group consisting of alkyl, haloalkyl, cyano, carboxyl, alkoxycarbonyl, hydroxyl, hydroxyalkyl, haloalkoxy, amino, alkylamino, phenylamino, nitro, alkoxyalkyl, alkylsulfinyl, halo, alkoxy, and alkylthio;

15 R² is selected from the group consisting of alkyl and amino;

20 R³ is selected from the group consisting of halo, alkyl, alkenyl, alkynyl, aryl, heteroaryl, oxo, cyano, carboxyl, cyanoalkyl, heterocyclyloxy, alkyloxy, alkylthio, alkylcarbonyl, cycloalkyl, phenyl, haloalkyl, heterocyclo, cycloalkenyl, phenylalkyl, heterocycloalkyl, alkylthioalkyl, hydroxyalkyl, alkoxycarbonyl, phenylcarbonyl, phenylalkylcarbonyl, phenylalkenyl, alkoxyalkyl, phenylthioalkyl, phenoxyalkyl, alkoxyphenylalkoxyalkyl, alkoxycarbonylalkyl, aminocarbonyl, aminocarbonylalkyl, alkylaminocarbonyl, N-phenylaminocarbonyl, N-alkyl-N-phenylaminocarbonyl, alkylaminocarbonylalkyl, carboxyalkyl, alkylamino, N-arylmino, N-arylalkylamino, N-alkyl-N-arylalkylamino, N-alkyl-N-arylaminooalkyl, aminoalkyl, alkylaminoalkyl, N-phenylaminoalkyl, N-phenylalkylaminoalkyl, N-alkyl-N-phenylalkylaminoalkyl, N-alkyl-N-phenylaminoalkyl, phenoxy, phenylalkoxy, phenylthio, phenylalkylthio, alkylsulfinyl, alkylsulfonyl,

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aminosulfonyl, alkylaminosulfonyl, N-phenylaminosulfonyl, phenylsulfonyl, and N-alkyl-N-phenylaminosulfonyl; and

R^4 is selected from the group consisting of hydrido and halo.

5 5. The method of claim 4 wherein A is selected from the group consisting of thienyl, oxazolyl, furyl, furanone, pyrrolyl, thiazolyl, imidazolyl, benzofuryl, indenyl, benzothienyl, isoxazolyl, pyrazolyl, cyclopentenyl, cyclopentadienyl, benzindazolyl, cyclopentenone, benzopyranopyrazolyl, phenyl, and pyridyl.

10 6. The method of claim 5 wherein A is substituted with one or more radicals selected from the group consisting of alkyl, halo, oxo, hydroxy and alkoxy.

15 7. The method of claim 4 wherein R^1 is selected from the group consisting of cyclohexyl, pyridinyl, and phenyl, wherein cyclohexyl, pyridinyl, and phenyl are optionally substituted with one or more radicals selected from the group consisting of alkyl, haloalkyl, cyano, carboxyl, alkoxy carbonyl, hydroxyl, hydroxyalkyl, haloalkoxy, amino, alkylamino, phenylamino, nitro, alkoxyalkyl, alkylsulfinyl, alkoxy, halo, alkoxy, and alkylthio.

20 8. The method of claim 7 wherein R^1 is selected from the group consisting of pyridyl, cyclohexyl, and phenyl, wherein R^1 is optionally substituted with one or more radicals selected from the group consisting of alkyl, halo, and alkoxy.

25 9. The method of claim 4 wherein R^2 is selected from the group consisting of methyl and amino.

30 10. The method of claim 4 wherein R^3 is selected from the group consisting of halo, alkyl, alkenyl, alkynyl, aryl, heteroaryl, oxo, hydroxyl, cyano, carboxyl, cyanoalkyl, heterocyclyloxy, alkyloxy, alkylthio, alkylcarbonyl, cycloalkyl, phenyl, haloalkyl, heterocyclo, cycloalkenyl, phenylalkyl, heterocyclalkyl,

alkylthioalkyl, hydroxyalkyl, alkoxycarbonyl, phenylcarbonyl,
phenylalkylcarbonyl, phenylalkenyl, alkoxyalkyl, phenylthioalkyl,
phenyloxyalkyl, alkoxyphenylalkoxyalkyl, alkoxycarbonylalkyl,
aminocarbonyl, aminocarbonylalkyl, alkylaminocarbonyl, N-
5 phenylaminocarbonyl, N-alkyl-N-phenylaminocarbonyl, alkylaminocarbonyl-
alkyl, carboxy-alkyl, alkylamino, N-aryl amino, N-arylalkylamino, N-alkyl-N-
arylalkylamino, N-alkyl-N-aryl amino, amino-alkyl, alkylaminoalkyl, N-
phenylamino-alkyl, N-phenyl-alkylaminoalkyl, N-alkyl-N-phenyl-alkylamino-
alkyl, N-alkyl-N-phenylaminoalkyl, phenyloxy, phenylalkoxy, phenylthio,
10 phenylalkylthio, alkylsulfinyl, alkylsulfonyl, aminosulfonyl,
alkylaminosulfonyl, N-phenylaminosulfonyl, phenylsulfonyl, and N-alkyl-N-
phenylaminosulfonyl.

11. The method of claim 10 wherein R³ is selected from the group consisting of
15 halo, alkyl, cyano, carboxyl, alkyloxy, phenyl, haloalkyl, and hydroxyalkyl.

12. The method of claim 4 wherein the selective COX-2 inhibiting agent is
selected from the group consisting of
20 rofecoxib,
celecoxib,
valdecoxib,
deracoxib,
etoricoxib,
4-(4-cyclohexyl-2-methyloxazol-5-yl)-2-fluorobenzenesulfonamide,
25 5-chloro-3-(4-(methylsulfonyl)phenyl)-2-(methyl-5-pyridinyl)pyridine,
2-(3,5-difluorophenyl)-3-4-(methylsulfonyl)phenyl)-2-cyclopenten-1-one,
N-[[4-(5-methyl-3-phenylisoxazol-4-yl)phenyl]sulfonyl]propanamide,
30 4-[5-(4-chorophenyl)-3-(trifluoromethyl)-1H-pyrazole-1-
yl]benzenesulfonamide,
3-(3,4-difluorophenoxy)-5,5-dimethyl-4-[4-(methylsulfonyl)phenyl]-2(5H)-
furanone,

N-[6-[(2,4-difluorophenyl)thio]-2,3-dihydro-1-oxo-1H-inden-5-yl]methanesulfonamide,
 3-(4-chlorophenyl)-4-[4-(methylsulfonyl)phenyl]-2(3H)-oxazolone,
 4-[3-(4-fluorophenyl)-2,3-dihydro-2-oxo-4-oxazolyl]benzenesulfonamide,
 5 3-[4-(methylsulfonyl)phenyl]-2-phenyl-2-cyclopenten-1-one,
 4-(2-methyl-4-phenyl-5-oxazolyl)benzenesulfonamide,
 3-(4-fluorophenyl)-4-[4-(methylsulfonyl)phenyl]-2(3H)-oxazolone,
 5-(4-fluorophenyl)-1-[4-(methylsulfonyl)phenyl]-3-(trifluoromethyl)-1H-pyrazole,
 10 4-[5-phenyl]-3-(trifluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide,
 4-[1-phenyl-3-(trifluoromethyl)-1H-pyrazol-5-yl]benzenesulfonamide,
 4-[5-(4-fluorophenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide,
 15 N-[2-(cyclohexyloxy)-4-nitrophenyl]methanesulfonamide,
 N-[6-(2,4-difluorophenoxy)-2,3-dihydro-1-oxo-1H-inden-5-yl]methanesulfonamide,
 3-(4-chlorophenoxy)-4-[(methylsulfonyl)amino]benzenesulfonamide,
 3-(4-fluorophenoxy)-4-[(methylsulfonyl)amino]benzenesulfonamide,
 3-[(1-methyl-1H-imidazol-2-yl)thio]-4-[(methylsulfonyl)amino]benzenesulfonamide,
 20 5,5-dimethyl-4-[4-(methylsulfonyl)phenyl]-3-phenoxy-2(5H)-furanone,
 N-[6-[(4-ethyl-2-thiazolyl)thio]-1,3-dihydro-1-oxo-5-isobenzofuranyl]methanesulfonamide,
 3-[(2,4-dichlorophenyl)thio]-4-[(methylsulfonyl)amino]benzenesulfonamide,
 25 1-fluoro-4-[2-[4-(methylsulfonyl)phenyl]cyclopenten-1-yl]benzene,
 4-[5-(4-chlorophenyl)-3-(difluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide,
 3-[[1-[4-(methylsulfonyl)phenyl]-4-(trifluoromethyl)-1H-imidazol-2-yl]pyridine,
 30 4-[2-(3-pyridinyl)-4-(trifluoromethyl)-1H-imidazol-1-yl]benzenesulfonamide,

4-[5-(hydroxymethyl)-3-phenylisoxazol-4-yl]benzenesulfonamide,
4-[3-(4-chlorophenyl)-2,3-dihydro-2-oxo-4-oxazolyl]benzenesulfonamide,
4-[5-(difluoromethyl)-3-phenylisoxazol-4-yl]benzenesulfonamide,
[1,1':2',1"-terphenyl]-4-sulfonamide,
5 4-(methylsulfonyl)-1,1',2],1"-terphenyl,
4-(2-phenyl-3-pyridinyl)benzenesulfonamide,
N-(2,3-dihydro-1,1-dioxido-6-phenoxy-1,2-benzisothiazol-5-
yl)methanesulfonamide,
N-[3-(formylamino)-4-oxo-6-phenoxy-4H-1-benzopyran-7-
10 yl]methanesulfonamide,
6-[[5-(4-chlorobenzoyl)-1,4—dimethyl-1H-pyrrol-2-yl]methyl]-3(2H)-
pyridazinone, and
N-(4-nitro-2-phenoxyphenyl)methanesulfonamide.

15 13. The method of claim 12 wherein the selective COX-2 inhibiting agent is rofecoxib.

14. The method of claim 12 wherein the selective COX-2 inhibiting agent is celecoxib.

20 15. The method of claim 12 wherein the selective COX-2 inhibiting agent is valdecoxib.

16. The method of claim 12 wherein the selective COX-2 inhibiting agent is deracoxib.

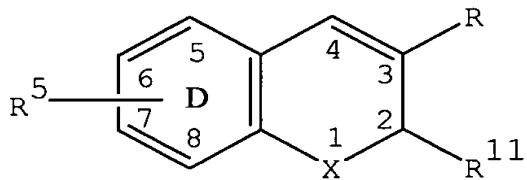
25 17. The method of claim 12 wherein the selective COX-2 inhibiting agent is 4-(4-cyclohexyl-2-methyloxazol-5-yl)-2-fluorobenzenesulfonamide.

30 18. The method of claim 12 wherein the selective COX-2 inhibiting agent is etoricoxib.

19. The method of claim 1 wherein the selective COX-2 inhibiting agent is selected from compounds of Formula 2:

5

2



or an isomer or pharmaceutically-acceptable salt or prodrug thereof, wherein

10 X is selected from the group consisting of O, S and NR^a;

 R^a is alkyl;

 R is selected from the group consisting of carboxyl, alkyl, aralkyl, aminocarbonyl, alkylsulfonylaminocarbonyl and alkoxy carbonyl;

15 R¹¹ is selected from the group consisting of haloalkyl, alkyl, aralkyl, cycloalkyl and aryl, wherein aryl is optionally substituted with one or more radicals selected from the group consisting of alkylthio, nitro and alkylsulfonyl; and

20 R⁵ is one or more radicals independently selected from the group consisting of hydrido, halo, alkyl, aralkyl, alkoxy, aryloxy, heteroaryloxy, aralkyloxy, heteroaralkyloxy, haloalkyl, haloalkoxy, alkylamino, arylamino, aralkylamino, heteroaryl amino, heteroarylalkylamino, nitro, amino, aminosulfonyl, alkylaminosulfonyl, arylaminosulfonyl, heteroarylaminosulfonyl, aralkylaminosulfonyl, heteroaralkylaminosulfonyl, heterocyclosulfonyl, alkylsulfonyl, optionally substituted aryl, optionally substituted heteroaryl, aralkylcarbonyl, heteroarylcarbonyl, arylcarbonyl, aminocarbonyl, and alkylcarbonyl, wherein R⁵ together with ring D optionally forms a naphthyl radical.

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20. The method of claim 19 wherein X is selected from the group consisting of O and S.

5 21. The method of claim 19 wherein R is selected from the group consisting of carboxyl, lower alkyl, lower aralkyl and lower alkoxy carbonyl.

22. The method of claim 21 wherein R is carboxyl.

10 23. The method of claim 19 wherein R¹¹ is selected from the group consisting of lower haloalkyl, lower cycloalkyl and phenyl.

24. The method of claim 23 wherein R¹¹ is lower haloalkyl.

15 25. The method of claim 24 wherein R¹¹ is selected from the group consisting of fluoromethyl, chloromethyl, dichloromethyl, trichloromethyl, pentafluoroethyl, heptafluoropropyl, difluoroethyl, difluoropropyl, dichloroethyl, dichloropropyl, difluoromethyl, and trifluoromethyl.

20 26. The method of claim 25 wherein R¹¹ is selected from the group consisting of trifluoromethyl and pentafluoroethyl.

27. The method of claim 19 wherein R⁵ is one or more radicals independently selected from the group consisting of hydrido, halo, lower alkyl, lower alkoxy, lower haloalkyl, lower haloalkoxy, lower alkylamino, nitro, amino, aminosulfonyl, lower alkylaminosulfonyl, 5- or 6- membered 25 heteroarylalkylaminosulfonyl, lower aralkylaminosulfonyl, 5- or 6- membered nitrogen containing heterocyclosulfonyl, lower alkylsulfonyl, optionally substituted phenyl, lower aralkylcarbonyl, and lower alkylcarbonyl.

28. The method of claim 27 wherein R^5 is one or more radicals independently selected from the group consisting of hydrido, chloro, fluoro, bromo, iodo, methyl, ethyl, isopropyl, *tert*-butyl, butyl, isobutyl, pentyl, hexyl, methoxy, ethoxy, isopropoxy, *tert*butyloxy, trifluoromethyl, difluoromethyl, trifluoromethoxy, amino, N,N-dimethylamino, N,N-diethylamino, N-phenylmethylaminosulfonyl, N-phenylethylaminosulfonyl, N-(2-furylmethyl)aminosulfonyl, nitro, N,N-dimethylaminosulfonyl, aminosulfonyl, N-methylaminosulfonyl, N-ethylsulfonyl, 2,2-dimethylethylaminosulfonyl, N,N-dimethylaminosulfonyl, N-(2-methylpropyl)aminosulfonyl, N-morpholinosulfonyl, methylsulfonyl, benzylcarbonyl, 2,2-dimethylpropylcarbonyl, phenylacetyl and phenyl.

29. The method of claim 28 wherein R^5 is one or more radicals independently selected from the group consisting of hydrido, chloro, fluoro, bromo, iodo, methyl, ethyl, isopropyl, *tert*-butyl, methoxy, trifluoromethyl, trifluoromethoxy, N-phenylmethylaminosulfonyl, N-phenylethylaminosulfonyl, N-(2-furylmethyl)aminosulfonyl, N,N-dimethylaminosulfonyl, N-methylaminosulfonyl, N-(2,2-dimethylethyl)aminosulfonyl, dimethylaminosulfonyl, 2-methylpropylaminosulfonyl, N-morpholinosulfonyl, methylsulfonyl, benzylcarbonyl, and phenyl.

30. The method of claim 19 wherein the selective COX-2 inhibiting agent is selected from the group consisting of 6-chloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid, 6-chloro-7-methyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid, 8-(1-methylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid, 6-chloro-7-(1,1-dimethylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid, 6-chloro-8-(1-methylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,

2-trifluoromethyl-3H-naphthopyran-3-carboxylic acid,
7-(1,1-dimethylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
6-bromo-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
8-chloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
5 6-trifluoromethoxy-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
5,7-dichloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
8-phenyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
7,8-dimethyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid
6,8-bis(dimethylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
10 7-(1-methylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
7-phenyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
6-chloro-7-ethyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
6-chloro-8-ethyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
6-chloro-7-phenyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
15 6,7-dichloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
6,8-dichloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
2-trifluoromethyl-3H-naphtho[2,1-b]pyran-3-carboxylic acid,
6-chloro-8-methyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
8-chloro-6-methyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
20 8-chloro-6-methoxy-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
6-bromo-8-chloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
8-bromo-6-fluoro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
8-bromo-6-methyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
8-bromo-5-fluoro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
25 6-chloro-8-fluoro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
6-bromo-8-methoxy-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
6-[[phenylmethyl]amino]sulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-
carboxylic acid,
6-[(dimethylamino)sulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic
30 acid,
6-[(methylamino)sulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic

acid,

6-[(4-morpholino)sulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,

6-[(1,1-dimethylethyl)aminosulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,

5 6-[(2-methylpropyl)aminosulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,

6-methylsulfonyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,

8-chloro-6-[[phenylmethyl)amino]sulfonyl]-2-trifluoromethyl-2H-1-

10 benzopyran-3-carboxylic acid,

6-phenylacetyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,

6,8-dibromo-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,

8-chloro-5,6-dimethyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,

6,8-dichloro-(S)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,

15 6-benzylsulfonyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,

6-[[N-(2-furylmethyl)amino]sulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,

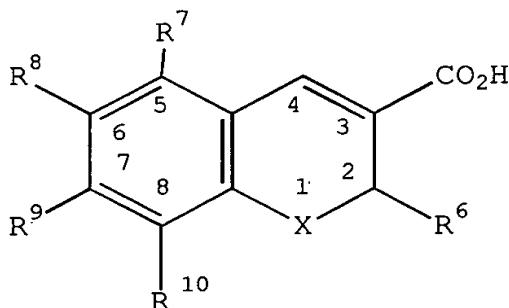
6-[[N-(2-phenylethyl)amino]sulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,

20 6-iodo-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,

7-(1,1-dimethylethyl)-2-pentafluoroethyl-2H-1-benzopyran-3-carboxylic acid, and

6-chloro-2-trifluoromethyl-2H-1-benzothiopyran-3-carboxylic acid.

25 31. The method of claim 1 wherein the selective COX-2 inhibiting agent is selected from compounds of Formula 3:



3

or an isomer or pharmaceutically-acceptable salt or prodrug thereof,
wherein

5 X is selected from the group consisting of O and S;

 R⁶ is lower haloalkyl;

 R⁷ is selected from the group consisting of hydrido and halo;

 R⁸ is selected from the group consisting of hydrido, halo, lower alkyl,
lower haloalkoxy, lower alkoxy, lower aralkylcarbonyl, lower
10 dialkylaminosulfonyl, lower alkylaminosulfonyl, lower aralkylaminosulfonyl,
lower heteroaralkylaminosulfonyl, and 5- or 6- membered nitrogen
containing heterocyclosulfonyl;

 R⁹ is selected from the group consisting of hydrido, lower alkyl, halo,
lower alkoxy, and aryl; and

15 R¹⁰ is selected from the group consisting of hydrido, halo, lower
alkyl, lower alkoxy, and aryl.

32. The method of claim 31 wherein R⁶ is selected from the group consisting of
trifluoromethyl and pentafluoroethyl.

20 33. The method of claim 31 wherein R⁷ is selected from the group consisting of
hydrido, chloro, and fluoro.

34. The method of claim 31 wherein R⁸ is selected from the group consisting of hydrido, chloro, bromo, fluoro, iodo, methyl, tert-butyl, trifluoromethoxy, methoxy, benzylcarbonyl, dimethylaminosulfonyl, isopropylaminosulfonyl, methylaminosulfonyl, benzylaminosulfonyl, phenylethylaminosulfonyl, methylpropylaminosulfonyl, methylsulfonyl, and morpholinosulfonyl.

5

35. The method of claim 31 wherein R⁹ is selected from the group consisting of hydrido, methyl, ethyl, isopropyl, tert-butyl, chloro, methoxy, diethylamino, and phenyl.

10

36. The method of claim 31 wherein R¹⁰ is selected from the group consisting of hydrido, chloro, bromo, fluoro, methyl, ethyl, tert-butyl, methoxy, and phenyl.

15 37. The method of claim 31 wherein the selective COX-2 inhibiting agent is selected from the group consisting of 6-Chloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid, (S)-6-Chloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid, 6-Chloro-7-(1,1-dimethylethyl)-2-trifluoromethyl-2H-1-benzopyran-3- carboxylic acid,

20 (S)-6-Chloro-7-(1,1-dimethylethyl)-2-(trifluoromethyl)-2H-1-benzopyran-3- carboxylic acid, 6-Trifluoromethoxy-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid, (S)-6-Trifluoromethoxy-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,

25 6-Formyl-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid, 6-(Difluoromethyl)-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid, 6,8-Dichloro-7-methyl-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid,

30 6,8-Dichloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,

(S)-6,8-Dichloro-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid,
6-Chloro-1,2-dihydro-2-(trifluoromethyl)-3-quinolinecarboxylic acid,
(S)-6-chloro-1,2-dihydro-2-(trifluoromethyl)-3-quinolinecarboxylic acid,
6,8-Dichloro-1,2-dihydro-2-(trifluoromethyl)-3-quinolinecarboxylic acid,
5 7-(1,1-Dimethylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
6,7-Dichloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
5,6-Dichloro-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid,
2,6-Bis(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid,
5,6,7-Trichloro-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid,
10 6,7,8-Trichloro-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid,
6-Iodo-1,2-dihydro-2-(trifluoromethyl)-3-quinolinecarboxylic acid,
6-Bromo-1,2-dihydro-2-(trifluoromethyl)-3-quinolinecarboxylic acid,
6-Chloro-7-methyl-2-(trifluoromethyl)-2H-1-benzothiopyran-3-carboxylic
acid, and
15 6,8-Dichloro-2-trifluoromethyl-2H-1-benzothiopyran-3-carboxylic acid.

38. The method of claim 37 wherein the selective COX-2 inhibiting agent is selected from the group consisting of
6-Chloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
20 (S)-6-Chloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
6-Chloro-7-(1,1-dimethylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-
carboxylic acid,
(S)-6-Chloro-7-(1,1-dimethylethyl)-2-(trifluoromethyl)-2H-1-benzopyran-3-
carboxylic acid,
25 6-Trifluoromethoxy-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
(S)-6-Trifluoromethoxy-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic
acid,
6-Formyl-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid,
6-(Difluoromethyl)-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid,
30 6,8-Dichloro-7-methyl-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic
acid,

6,8-Dichloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
(S)-6,8-Dichloro-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid,
6-Chloro-1,2-dihydro-2-(trifluoromethyl)-3-quinolinecarboxylic acid,
(S)-6-chloro-1,2-dihydro-2-(trifluoromethyl)-3-quinolinecarboxylic acid, and
5 6,8-Dichloro-1,2-dihydro-2-(trifluoromethyl)-3-quinolinecarboxylic acid.

39. The method of claim 1 wherein the selective COX-2 inhibiting agent is selected from compounds that correspond in structure, and pharmaceutically acceptable salts thereof, of the group consisting of:
10 *N*-(2,3-dihydro-1,1-dioxido-6-phenoxy-1,2-benzisothiazol-5-yl)methanesulfonamide,
6-[[5-(4-chlorobenzoyl)-1,4-dimethyl-1*H*-pyrrol-2-yl]methyl]-3(2*H*)-pyridazinone,
N-(4-nitro-2-phenoxyphenyl)methanesulfonamide,
15 3-(3,4-difluorophenoxy)-5,5-dimethyl-4-[4-(methylsulfonyl)phenyl]-2(5*H*)-furanone,
N-[6-[(2,4-difluorophenyl)thio]-2,3-dihydro-1-oxo-1*H*-inden-5-yl]methanesulfonamide,
N-[2-(cyclohexyloxy)-4-nitrophenyl]methanesulfonamide,
20 N-[6-(2,4-difluorophenoxy)-2,3-dihydro-1-oxo-1*H*-inden-5-yl]methanesulfonamide,
3-(4-chlorophenoxy)-4-[(methylsulfonyl)amino]benzenesulfonamide,
3-(4-fluorophenoxy)-4-[(methylsulfonyl)amino]benzenesulfonamide,
3-[(1-methyl-1*H*-imidazol-2-yl)thio]-4-[(methylsulfonyl)amino]benzenesulfonamide,
25 5,5-dimethyl-4-[4-(methylsulfonyl)phenyl]-3-phenoxy-2(5*H*)-furanone,
N-[6-[(4-ethyl-2-thiazolyl)thio]-1,3-dihydro-1-oxo-5-isobenzofuranyl]methanesulfonamide,
3-[(2,4-dichlorophenyl)thio]-4-[(methylsulfonyl)amino]benzenesulfonamide,
30 *N*-(2,3-dihydro-1,1-dioxido-6-phenoxy-1,2-benzisothiazol-5-yl)methanesulfonamide, and

N-[3-(formylamino)-4-oxo-6-phenoxy-4H-1-benzopyran-7-
yl]methanesulfonamide.

40. The method of claim 1 wherein the neoplasia disorder is selected from the
5 group consisting of a lung, a breast, a skin, a stomach, an intestine, an
esophagus, a bladder, a head, a neck, a brain, a cervical, and an ovary
neoplasia disorder.

41. The method of claim 1 wherein the neoplasia disorder is selected from the
10 group consisting of acral lentiginous melanoma, an actinic keratosis,
adenocarcinoma, adenoid cystic carcinoma, an adenoma, adenosarcoma,
adenosquamous carcinoma, an astrocytic tumor, bartholin gland carcinoma,
basal cell carcinoma, a bronchial gland carcinoma, capillary carcinoma, a
carcinoid, carcinoma, carcinosarcoma, cavernous carcinoma,
15 cholangiocarcinoma, chondrosarcoma, choriod plexus papilloma, choriod
plexus carcinoma, clear cell carcinoma, cystadenoma, endodermal sinus
tumor, endometrial hyperplasia, endometrial stromal sarcoma, endometrioid
adenocarcinoma, ependymal carcinoma, epitheloid carcinoma, Ewing's
sarcoma, fibrolamellar, focal nodular hyperplasia, gastrinoma, a germ cell
20 tumor, glioblastoma, glucagonoma, hemangiblastoma,
hemangioendothelioma, a hemangioma, hepatic adenoma, hepatic
adenomatosis, hepatocellular carcinoma, insulinoma, intraepithelial neoplasia,
interepithelial squamous cell neoplasia, invasive squamous cell carcinoma,
large cell carcinoma, leiomyosarcoma, a lentigo maligna melanoma,
25 malignant melanoma, a malignant mesothelial tumor, medulloblastoma,
medulloepithelioma, melanoma, meningeal, mesothelial, metastatic
carcinoma, mucoepidermoid carcinoma, neuroblastoma, neuroepithelial
adenocarcinoma nodular melanoma, oat cell carcinoma, oligodendroglial,
osteosarcoma, pancreatic polypeptide, papillary serous adenocarcinoma,
30 pineal cell, a pituitary tumor, plasmacytoma, pseudosarcoma, pulmonary
blastoma, renal cell carcinoma, retinoblastoma, rhabdomyosarcoma, sarcoma,

serous carcinoma, small cell carcinoma, a soft tissue carcinoma, somatostatin-secreting tumor, squamous carcinoma, squamous cell carcinoma, submesothelial, superficial spreading melanoma, undifferentiated carcinoma, uveal melanoma, verrucous carcinoma, vipoma, a well differentiated carcinoma, and Wilm's tumor.

10 42. The method of claim 1 wherein the selective COX-2 inhibiting agent and the DNA topoisomerase I inhibiting agent are formulated in a single composition.

15 43. The method of claim 1 wherein the selective COX-2 inhibiting agent and the DNA topoisomerase I inhibiting agent are provided as a separate component of a kit.

20 44. The method of claim 1 wherein the mammal is a human.

45. The method of claim 1 wherein the selective COX-2 inhibiting agent and the DNA topoisomerase I inhibiting agent are administered in a sequential manner.

25 46. The method of claim 1 wherein the selective COX-2 inhibiting agent and the DNA topoisomerase I inhibiting agent are administered in a substantially simultaneous manner.

47. A pharmaceutical composition comprising a DNA topoisomerase I inhibiting agent and a COX-2 inhibiting agent wherein the DNA topoisomerase I inhibiting agent and the selective COX-2 inhibiting agent together make a neoplasia disorder effective amount.

30 48. The pharmaceutical composition of claim 47 wherein the DNA topoisomerase I inhibiting agent is selected from the group consisting of

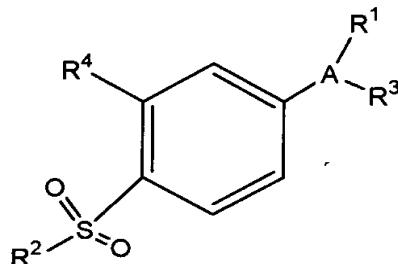
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irinotecan; irinotecan hydrochloride; camptothecin; 9-aminocamptothecin; 9-nitrocamptothecin; 9-chloro-10-hydroxy camptothecin; topotecan; topotecan hydrochloride; lurtotecan; lurtotecan dihydrochloride; lurtotecan (liposomal); homosilatecans; 6,8-dibromo-2-methyl-3-[2-(D-xylopyranosylamino)phenyl]-4(3H)-quinazolinone; 2-cyano-3-(3,4-dihydroxyphenyl)-N-(phenylmethyl)-(2E)-2-propenamide; 2-cyano-3-(3,4-dihydroxyphenyl)-N-(3-hydroxyphenylpropyl)-(E)-2-propenamide; 5H-indolo[2,3-a]pyrrolo[3,4-c]carbazole-5,7(6H)-dione, 12-.beta.-D-glucopyranosyl-12,13-dihydro-2,10-dihydroxy-6-[[2-hydroxy-1-(hydroxymethyl)ethyl]amino]-; 4-acridinecarboxamide, N-[2-(dimethylamino)ethyl]-, dihydrochloride; and 4-acridinecarboxamide, N-[2-(dimethylamino)ethyl]-.

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15 49. The pharmaceutical composition of claim 48 wherein the DNA topoisomerase I inhibiting agent is selected from the group consisting of irinotecan, irinotecan hydrochloride, camptothecin, 9-aminocamptothecin, 9-nitrocamptothecin, 9-chloro-10-hydroxy camptothecin, topotecan, topotecan hydrochloride, lurtotecan, lurtotecan dihydrochloride, lurtotecan (liposomal), and homosilatecans.

20 50. The pharmaceutical composition of claim 47 wherein the selective COX-2 inhibiting agent is selected from compounds of Formula 1:



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25 or a pharmaceutically-acceptable salt or prodrug thereof,
wherein
A is a 5- or 6-member ring substituent selected from the group consisting of heterocyclyl and carbocyclyl, wherein A is optionally

substituted with one or more radicals selected from the group consisting of hydroxy, alkyl, halo, oxo, and alkoxy;

5 R¹ is selected from the group consisting of cyclohexyl, pyridinyl, and phenyl, wherein R¹ is optionally substituted with one or more radicals selected from the group consisting of alkyl, haloalkyl, cyano, carboxyl, alkoxy carbonyl, hydroxyl, hydroxyalkyl, haloalkoxy, amino, alkylamino, phenylamino, nitro, alkoxyalkyl, alkylsulfinyl, halo, alkoxy, and alkylthio;

10 R² is selected from the group consisting of alkyl and amino;

15 R³ is selected from the group consisting of halo, alkyl, alkenyl, alkynyl, aryl, heteroaryl, oxo, cyano, carboxyl, cyanoalkyl, heterocyclyloxy, alkyloxy, alkylthio, alkylcarbonyl, cycloalkyl, phenyl, haloalkyl, heterocyclo, cycloalkenyl, phenylalkyl, heterocycloalkyl, alkylthioalkyl, hydroxyalkyl, alkoxy carbonyl, phenylcarbonyl, phenylalkylcarbonyl, phenylalkenyl, alkoxyalkyl, phenylthioalkyl, phenoxyalkyl, alkoxyphenylalkoxyalkyl, alkoxy carbonylalkyl, aminocarbonyl, aminocarbonylalkyl, alkylaminocarbonyl, N-phenylaminocarbonyl, N-alkyl-N-phenylaminocarbonyl, alkylaminocarbonylalkyl, carboxyalkyl, alkylamino, N-aryl amino, N-arylalkylamino, N-alkyl-N-arylalkylamino, N-alkyl-N-aryl amino, aminoalkyl, alkylaminoalkyl, N-phenylaminoalkyl, N-phenylalkylaminoalkyl, N-alkyl-N-phenylalkylaminoalkyl, N-alkyl-N-phenylaminoalkyl, phenoxy, phenylalkoxy, phenylthio, phenylalkylthio, alkylsulfinyl, alkylsulfonyl, aminosulfonyl, alkylaminosulfonyl, N-phenylaminosulfonyl, phenylsulfonyl, and N-alkyl-N-phenylaminosulfonyl; and

25 R⁴ is selected from the group consisting of hydrido and halo.

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51. The pharmaceutical composition of claim wherein A is selected from the group consisting of thienyl, oxazolyl, furyl, furanone, pyrrolyl, thiazolyl, imidazolyl, benzofuryl, indenyl, benzothienyl, isoxazolyl, pyrazolyl, cyclopentenyl, cyclopentadienyl, benzindazolyl, cyclopentenone, benzopyranopyrazolyl, phenyl, and pyridyl.

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52. The pharmaceutical composition of claim 51 wherein A is substituted with one or more radicals selected from the group consisting of alkyl, halo, oxo, hydroxy and alkoxy.

5 53. The pharmaceutical composition of claim 50 wherein R¹ is selected from the group consisting of cyclohexyl, pyridinyl, and phenyl, wherein cyclohexyl, pyridinyl, and phenyl are optionally substituted with one or more radicals selected from the group consisting of alkyl, haloalkyl, cyano, carboxyl, alkoxycarbonyl, hydroxyl, hydroxyalkyl, haloalkoxy, amino, alkylamino, phenylamino, nitro, alkoxyalkyl, alkylsulfinyl, alkoxy, halo, alkoxy, and alkylthio.

10 54. The pharmaceutical composition of claim 53 wherein R¹ is selected from the group consisting of pyridyl, cyclohexyl, and phenyl, wherein R¹ is optionally substituted with one or more radicals selected from the group consisting of alkyl, halo, and alkoxy.

15 55. The pharmaceutical composition of claim 50 wherein R² is selected from the group consisting of methyl and amino.

20 56. The pharmaceutical composition of claim 50 wherein R³ is selected from the group consisting of halo, alkyl, alkenyl, alkynyl, aryl, heteroaryl, oxo, hydroxyl, cyano, carboxyl, cyanoalkyl, heterocyclyloxy, alkyloxy, alkylthio, alkylcarbonyl, cycloalkyl, phenyl, haloalkyl, heterocyclo, cycloalkenyl, phenylalkyl, heterocyclalkyl, alkylthioalkyl, hydroxyalkyl, alkoxycarbonyl, phenylcarbonyl, phenylalkylcarbonyl, phenylalkenyl, alkoxyalkyl, phenylthioalkyl, phenoxyalkyl, alkoxyphenylalkoxyalkyl, alkoxycarbonylalkyl, aminocarbonyl, aminocarbonylalkyl, alkylaminocarbonyl, N-phenylaminocarbonyl, N-alkyl-N-phenylaminocarbonyl, alkylaminocarbonyl-alkyl, carboxy-alkyl, alkylamino, N-aryl-amino, N-arylalkylamino, N-alkyl-N-arylalkylamino, N-alkyl-N-aryl-amino,

5 amino-alkyl, alkylaminoalkyl, N-phenylamino-alkyl, N-phenyl-alkylaminoalkyl, N-alkyl-N-phenyl-alkylamino-alkyl, N-alkyl-N-phenylaminoalkyl, phenoxy, phenylalkoxy, phenylthio, phenylalkylthio, alkylsulfinyl, alkylsulfonyl, aminosulfonyl, alkylaminosulfonyl, N-phenylaminosulfonyl, phenylsulfonyl, and N-alkyl-N-phenylaminosulfonyl.

10 57. The pharmaceutical composition of claim 56 wherein R³ is a selected from the group consisting of halo, alkyl, cyano, carboxyl, alkyloxy, phenyl, haloalkyl, and hydroxyalkyl.

15 58. The pharmaceutical composition of claim 50 wherein the selective COX-2 inhibiting agent is selected from the group consisting of

rofecoxib,

celecoxib,

valdecoxib,

deracoxib,

etoricoxib,

4-(4-cyclohexyl-2-methyloxazol-5-yl)-2-fluorobenzenesulfonamide,

5-chloro-3-(4-(methylsulfonyl)phenyl)-2-(methyl-5-pyridinyl)pyridine,

2-(3,5-difluorophenyl)-3-4-(methylsulfonyl)phenyl)-2-cyclopenten-1-one,

N-[[4-(5-methyl-3-phenylisoxazol-4-yl]phenyl]sulfonyl]propanamide,

4-[5-(4-chorophenyl)-3-(trifluoromethyl)-1H-pyrazole-1-

yl]benzenesulfonamide,

3-(3,4-difluorophenoxy)-5,5-dimethyl-4-[4-(methylsulfonyl)phenyl]-2(5H)-

furanone,

N-[6-[(2,4-difluorophenyl)thio]-2,3-dihydro-1-oxo-1H-inden-5-

yl]methanesulfonamide,

3-(4-chlorophenyl)-4-[4-(methylsulfonyl)phenyl]-2(3H)-oxazolone,

4-[3-(4-fluorophenyl)-2,3-dihydro-2-oxo-4-oxazolyl]benzenesulfonamide,

3-[4-(methylsulfonyl)phenyl]-2-phenyl-2-cyclopenten-1-one,

4-(2-methyl-4-phenyl-5-oxazolyl)benzenesulfonamide,

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3-(4-fluorophenyl)-4-[4-(methylsulfonyl)phenyl]-2(3H)-oxazolone,
 5-(4-fluorophenyl)-1-[4-(methylsulfonyl)phenyl]-3-(trifluoromethyl)-1H-pyrazole,
 4-[5-phenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide,
 5 4-[1-phenyl-3-(trifluoromethyl)-1H-pyrazol-5-yl]benzenesulfonamide,
 4-[5-(4-fluorophenyl)-3-(trifluoromethyl)-1H-pyrazol-1-
 yl]benzenesulfonamide,
 N-[2-(cyclohexyloxy)-4-nitrophenyl]methanesulfonamide,
 N-[6-(2,4-difluorophenoxy)-2,3-dihydro-1-oxo-1H-inden-5-
 10 yl]methanesulfonamide,
 3-(4-chlorophenoxy)-4-[(methylsulfonyl)amino]benzenesulfonamide,
 3-(4-fluorophenoxy)-4-[(methylsulfonyl)amino]benzenesulfonamide,
 3-[(1-methyl-1H-imidazol-2-yl)thio]-4-[(methylsulfonyl)
 15 amino]benzenesulfonamide,
 5,5-dimethyl-4-[4-(methylsulfonyl)phenyl]-3-phenoxy-2(5H)-furanone,
 N-[6-[(4-ethyl-2-thiazolyl)thio]-1,3-dihydro-1-oxo-5-
 isobenzofuranyl]methanesulfonamide,
 3-[(2,4-dichlorophenyl)thio]-4-[(methylsulfonyl)amino]benzenesulfonamide,
 1-fluoro-4-[2-[4-(methylsulfonyl)phenyl]cyclopenten-1-yl]benzene,
 20 4-[5-(4-chlorophenyl)-3-(difluoromethyl)-1H-pyrazol-1-
 yl]benzenesulfonamide,
 3-[[1-[4-(methylsulfonyl)phenyl]-4-(trifluoromethyl)-1H-imidazol-2-
 yl]pyridine,
 4-[2-(3-pyridinyl)-4-(trifluoromethyl)-1H-imidazol-1-
 25 yl]benzenesulfonamide,
 4-[5-(hydroxymethyl)-3-phenylisoxazol-4-yl]benzenesulfonamide,
 4-[3-(4-chlorophenyl)-2,3-dihydro-2-oxo-4-oxazolyl]benzenesulfonamide,
 4-[5-(difluoromethyl)-3-phenylisoxazol-4-yl]benzenesulfonamide,
 [1,1':2',1"-terphenyl]-4-sulfonamide,
 30 4-(methylsulfonyl)-1,1',2],1"-terphenyl,
 4-(2-phenyl-3-pyridinyl)benzenesulfonamide,

N-(2,3-dihydro-1,1-dioxido-6-phenoxy-1,2-benzisothiazol-5-yl)methanesulfonamide,

N-[3-(formylamino)-4-oxo-6-phenoxy-4H-1-benzopyran-7-yl]methanesulfonamide,

5 6-[[5-(4-chlorobenzoyl)-1,4—dimethyl-1H-pyrrol-2-yl]methyl]-3(2H)-pyridazinone, and

N-(4-nitro-2-phenoxyphenyl)methanesulfonamide.

59. The pharmaceutical composition of claim 58 wherein the selective COX-2
10 inhibiting agent is rofecoxib.

60. The pharmaceutical composition of claim 58 wherein the selective COX-2
inhibiting agent is celecoxib.

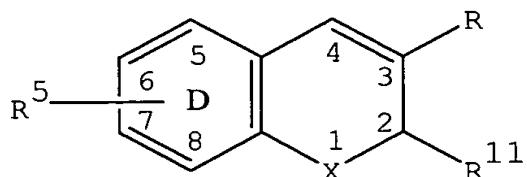
15 61. The pharmaceutical composition of claim 58 wherein the selective COX-2
inhibiting agent is valdecoxib.

62. The pharmaceutical composition of claim 58 wherein the selective COX-2
inhibiting agent is deracoxib.

20 63. The pharmaceutical composition of claim 58 wherein the selective COX-2
inhibiting agent is 4-(4-cyclohexyl-2-methyloxazol-5-yl)-2-
fluorobenzenesulfonamide.

25 64. The pharmaceutical composition of claim 58 wherein the selective COX-2
inhibiting agent is etoricoxib.

65. The pharmaceutical composition of claim 50 wherein the selective COX-2
inhibiting agent is selected from compounds of Formula 2:



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or an isomer or pharmaceutically-acceptable salt or prodrug thereof,

5 wherein

X is selected from the group consisting of O, S and NR^a;

R^a is alkyl;

R is selected from the group consisting of carboxyl, alkyl, aralkyl, aminocarbonyl, alkylsulfonylaminocarbonyl and alkoxycarbonyl;

10 R^{11} is selected from the group consisting of haloalkyl, alkyl, aralkyl, cycloalkyl and aryl, wherein aryl is optionally substituted with one or more radicals selected from the group consisting of alkylthio, nitro and alkylsulfonyl; and

25 66. The pharmaceutical composition of claim 65 wherein X is selected from the
group consisting of O and S.

67. The pharmaceutical composition of claim 65 wherein R is selected from the group consisting of carboxyl, lower alkyl, lower aralkyl and lower alkoxy carbonyl.

5 68. The pharmaceutical composition of claim 67 wherein R is carboxyl.

69. The pharmaceutical composition of claim 65 wherein R¹¹ is selected from the group consisting of lower haloalkyl, lower cycloalkyl and phenyl.

10 70. The pharmaceutical composition of claim 69 wherein R¹¹ is lower haloalkyl.

71. The method of claim 70 wherein R¹¹ is selected from the group consisting of fluoromethyl, chloromethyl, dichloromethyl, trichloromethyl, pentafluoroethyl, heptafluoropropyl, difluoroethyl, difluoropropyl, dichloroethyl, dichloropropyl, difluoromethyl, and trifluoromethyl.

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72. The pharmaceutical composition of claim 71 wherein R¹¹ is selected from the group consisting of trifluoromethyl and pentafluoroethyl.

20 73. The pharmaceutical composition of claim 65 wherein R⁵ is one or more radicals independently selected from the group consisting of hydrido, halo, lower alkyl, lower alkoxy, lower haloalkyl, lower haloalkoxy, lower alkylamino, nitro, amino, aminosulfonyl, lower alkylaminosulfonyl, 5- or 6-membered heteroarylalkylaminosulfonyl, lower aralkylaminosulfonyl, 5- or 6-membered nitrogen containing heterocyclosulfonyl, lower alkylsulfonyl, optionally substituted phenyl, lower aralkylcarbonyl, and lower alkylcarbonyl.

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74. The pharmaceutical composition of claim 73 wherein R⁵ is one or more radicals independently selected from the group consisting of hydrido, chloro, fluoro, bromo, iodo, methyl, ethyl, isopropyl, *tert*-butyl, butyl, isobutyl, pentyl, hexyl, methoxy, ethoxy, isopropoxy, tertbutyloxy, trifluoromethyl, difluoromethyl, trifluoromethoxy, amino, N,N-dimethylamino, N,N-diethylamino, N-phenylmethylaminosulfonyl, N-phenylethylaminosulfonyl, N-(2-furylmethyl)aminosulfonyl, nitro, N,N-dimethylaminosulfonyl, aminosulfonyl, N-methylaminosulfonyl, N-ethylsulfonyl, 2,2-dimethylethylaminosulfonyl, N,N-dimethylaminosulfonyl, N-(2-methylpropyl)aminosulfonyl, N-morpholinosulfonyl, methylsulfonyl, benzylcarbonyl, 2,2-dimethylpropylcarbonyl, phenylacetyl and phenyl.

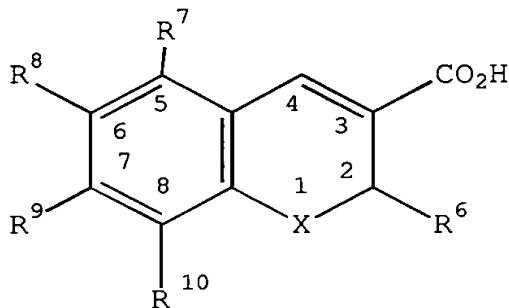
75. The pharmaceutical composition of claim 74 wherein R⁵ is one or more radicals independently selected from the group consisting of hydrido, chloro, fluoro, bromo, iodo, methyl, ethyl, isopropyl, *tert*-butyl, methoxy, trifluoromethyl, trifluoromethoxy, N-phenylmethylaminosulfonyl, N-phenylethylaminosulfonyl, N-(2-furylmethyl)aminosulfonyl, N,N-dimethylaminosulfonyl, N-methylaminosulfonyl, N-(2,2-dimethylethyl)aminosulfonyl, dimethylaminosulfonyl, 2-methylpropylaminosulfonyl, N-morpholinosulfonyl, methylsulfonyl, benzylcarbonyl, and phenyl.

76. The pharmaceutical composition of claim 65 wherein the selective COX-2 inhibiting agent is selected from the group consisting of 6-chloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid, 6-chloro-7-methyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid, 8-(1-methylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid, 6-chloro-7-(1,1-dimethylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid, 6-chloro-8-(1-methylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,

2-trifluoromethyl-3H-naphthopyran-3-carboxylic acid,
 7-(1,1-dimethylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
 6-bromo-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
 8-chloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
 5 6-trifluoromethoxy-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
 5,7-dichloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
 8-phenyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
 7,8-dimethyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid
 6,8-bis(dimethylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
 10 7-(1-methylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
 7-phenyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
 6-chloro-7-ethyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
 6-chloro-8-ethyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
 6-chloro-7-phenyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
 15 6,7-dichloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
 6,8-dichloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
 2-trifluoromethyl-3H-naphtho[2,1-b]pyran-3-carboxylic acid,
 6-chloro-8-methyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
 8-chloro-6-methyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
 20 8-chloro-6-methoxy-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
 6-bromo-8-chloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
 8-bromo-6-fluoro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
 8-bromo-6-methyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
 8-bromo-5-fluoro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
 25 6-chloro-8-fluoro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
 6-bromo-8-methoxy-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
 6-[[[(phenylmethyl)amino]sulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-
 carboxylic acid,
 6-[[[(dimethylamino)sulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic
 30 acid,
 6-[[[(methylamino)sulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic

acid,
6-[(4-morpholino)sulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
6-[(1,1-dimethylethyl)aminosulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
5 6-[(2-methylpropyl)aminosulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
6-methylsulfonyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
8-chloro-6-[[phenylmethyl]amino]sulfonyl]-2-trifluoromethyl-2H-1-
10 benzopyran-3-carboxylic acid,
6-phenylacetyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
6,8-dibromo-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
8-chloro-5,6-dimethyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
6,8-dichloro-(S)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
15 6-benzylsulfonyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
6-[[N-(2-furylmethyl)amino]sulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-
carboxylic acid,
6-[[N-(2-phenylethyl)amino]sulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-
20 carboxylic acid,
6-iodo-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
7-(1,1-dimethylethyl)-2-pentafluoroethyl-2H-1-benzopyran-3-carboxylic
acid, and
6-chloro-2-trifluoromethyl-2H-1-benzothiopyran-3-carboxylic acid.

25 77. The pharmaceutical composition of claim 47 wherein the selective COX-2
inhibiting agent is selected from compounds of Formula 3:

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or an isomer or pharmaceutically-acceptable salt or prodrug thereof,
wherein

5 X is selected from the group consisting of O and S;

 R⁶ is lower haloalkyl;

 R⁷ is selected from the group consisting of hydrido and halo;

 R⁸ is selected from the group consisting of hydrido, halo, lower alkyl,
lower haloalkoxy, lower alkoxy, lower aralkylcarbonyl, lower
dialkylaminosulfonyl, lower alkylaminosulfonyl, lower aralkylaminosulfonyl,
lower heteroaralkylaminosulfonyl, and 5- or 6- membered nitrogen
containing heterocyclosulfonyl;

 R⁹ is selected from the group consisting of hydrido, lower alkyl, halo,
lower alkoxy, and aryl; and

10 R¹⁰ is selected from the group consisting of hydrido, halo, lower
alkyl, lower alkoxy, and aryl.

15 78. The pharmaceutical composition of claim 77 wherein R⁶ is selected from the
group consisting of trifluoromethyl and pentafluoroethyl.

20 79. The pharmaceutical composition of claim 77 wherein R⁷ is selected from the
group consisting of hydrido, chloro, and fluoro.

80. The pharmaceutical composition of claim 77 wherein R⁸ is selected from the group consisting of hydrido, chloro, bromo, fluoro, iodo, methyl, tert-butyl, trifluoromethoxy, methoxy, benzylcarbonyl, dimethylaminosulfonyl, isopropylaminosulfonyl, methylaminosulfonyl, benzylaminosulfonyl, phenylethylaminosulfonyl, methylpropylaminosulfonyl, methylsulfonyl, and morpholinosulfonyl.

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81. The pharmaceutical composition of claim 77 wherein R⁹ is selected from the group consisting of hydrido, methyl, ethyl, isopropyl, tert-butyl, chloro, methoxy, diethylamino, and phenyl.

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82. The pharmaceutical composition of claim 77 wherein R¹⁰ is selected from the group consisting of hydrido, chloro, bromo, fluoro, methyl, ethyl, tert-butyl, methoxy, and phenyl.

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83. The pharmaceutical composition of claim 77 wherein the selective COX-2 inhibiting agent is selected from the group consisting of 6-Chloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid, (S)-6-Chloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid, 6-Chloro-7-(1,1-dimethylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid, (S)-6-Chloro-7-(1,1-dimethylethyl)-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid, 6-Trifluoromethoxy-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid, (S)-6-Trifluoromethoxy-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid, 6-Formyl-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid, 6-(Difluoromethyl)-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid, 6,8-Dichloro-7-methyl-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid,

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6,8-Dichloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
(S)-6,8-Dichloro-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid,
6-Chloro-1,2-dihydro-2-(trifluoromethyl)-3-quinolinecarboxylic acid,
(S)-6-chloro-1,2-dihydro-2-(trifluoromethyl)-3-quinolinecarboxylic acid,
5 6,8-Dichloro-1,2-dihydro-2-(trifluoromethyl)-3-quinolinecarboxylic acid,
7-(1,1-Dimethylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
6,7-Dichloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
5,6-Dichloro-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid,
2,6-Bis(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid,
10 5,6,7-Trichloro-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid,
6,7,8-Trichloro-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid,
6-Iodo-1,2-dihydro-2-(trifluoromethyl)-3-quinolinecarboxylic acid,
6-Bromo-1,2-dihydro-2-(trifluoromethyl)-3-quinolinecarboxylic acid,
6-Chloro-7-methyl-2-(trifluoromethyl)-2H-1-benzothiopyran-3-carboxylic
15 acid, and
6,8-Dichloro-2-trifluoromethyl-2H-1-benzothiopyran-3-carboxylic acid.

84. The pharmaceutical composition of claim 83 wherein the selective COX-2
inhibiting agent is selected from the group consisting of
20 6-Chloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
(S)-6-Chloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
6-Chloro-7-(1,1-dimethylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-
25 carboxylic acid,
(S)-6-Chloro-7-(1,1-dimethylethyl)-2-(trifluoromethyl)-2H-1-benzopyran-3-
carboxylic acid,
6-Trifluoromethoxy-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
(S)-6-Trifluoromethoxy-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic
30 acid,
6-Formyl-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid,
6-(Difluoromethyl)-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid,

6,8-Dichloro-7-methyl-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid,

6,8-Dichloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,

(S)-6,8-Dichloro-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid,

5 6-Chloro-1,2-dihydro-2-(trifluoromethyl)-3-quinolinecarboxylic acid,

(S)-6-chloro-1,2-dihydro-2-(trifluoromethyl)-3-quinolinecarboxylic acid, and

6,8-Dichloro-1,2-dihydro-2-(trifluoromethyl)-3-quinolinecarboxylic acid.

85. The pharmaceutical composition of claim 47 wherein the selective COX-2
10 inhibiting agent is selected from compounds that correspond in structure, and
pharmaceutically acceptable salts thereof, of the group consisting of:
15 *N*-(2,3-dihydro-1,1-dioxido-6-phenoxy-1,2-benzisothiazol-5-
yl)methanesulfonamide,
6-[[5-(4-chlorobenzoyl)-1,4—dimethyl-1H-pyrrol-2-yl]methyl]-3(2H)-
pyridazinone,
N-(4-nitro-2-phenoxyphenyl)methanesulfonamide,
3-(3,4-difluorophenoxy)-5,5-dimethyl-4-[4-(methylsulfonyl)phenyl]-2(5H)-
furanone,
N-[6-[(2,4-difluorophenyl)thio]-2,3-dihydro-1-oxo-1H-inden-5-
20 yl]methanesulfonamide,
N-[2-(cyclohexyloxy)-4-nitrophenyl]methanesulfonamide,
N-[6-(2,4-difluorophenoxy)-2,3-dihydro-1-oxo-1H-inden-5-
yl]methanesulfonamide,
3-(4-chlorophenoxy)-4-[(methylsulfonyl)amino]benzenesulfonamide,
25 3-(4-fluorophenoxy)-4-[(methylsulfonyl)amino]benzenesulfonamide,
3-[(1-methyl-1H-imidazol-2-yl)thio]-4 [(methylsulfonyl)
amino]benzenesulfonamide,
5,5-dimethyl-4-[4-(methylsulfonyl)phenyl]-3-phenoxy-2(5H)-furanone,
N-[6-[(4-ethyl-2-thiazolyl)thio]-1,3-dihydro-1-oxo-5-
30 isobenzofuranyl]methanesulfonamide,
3-[(2,4-dichlorophenyl)thio]-4-[(methylsulfonyl)amino]benzenesulfonamide,

N-(2,3-dihydro-1,1-dioxido-6-phenoxy-1,2-benzisothiazol-5-yl)methanesulfonamide, and
N-[3-(formylamino)-4-oxo-6-phenoxy-4H-1-benzopyran-7-yl]methanesulfonamide.

5

86. The pharmaceutical composition of claim 47 wherein the neoplasia disorder is selected from the group consisting of a lung, a breast, a skin, a stomach, an intestine, an esophagus, a bladder, a head, a neck, a brain, a cervical, and an ovary neoplasia disorder.

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87. The pharmaceutical composition of claim 47 wherein the neoplasia disorder is selected from the group consisting of acral lentiginous melanoma, an actinic keratosis, adenocarcinoma, adenoid cystic carcinoma, an adenoma, adenosarcoma, adenosquamous carcinoma, an astrocytic tumor, bartholin gland carcinoma, basal cell carcinoma, a bronchial gland carcinoma, capillary carcinoma, a carcinoid, carcinoma, carcinosarcoma, cavernous carcinoma, cholangiocarcinoma, chondrosarcoma, choriod plexus papilloma, choriod plexus carcinoma, clear cell carcinoma, cystadenoma, endodermal sinus tumor, endometrial hyperplasia, endometrial stromal sarcoma, endometrioid adenocarcinoma, ependymal carcinoma, epitheloid carcinoma, Ewing's sarcoma, fibrolamellar, focal nodular hyperplasia, gastrinoma, a germ cell tumor, glioblastoma, glucagonoma, hemangiblastoma, hemangioendothelioma, a hemangioma, hepatic adenoma, hepatic adenomatosis, hepatocellular carcinoma, insulinoma, intraepithelial neoplasia, interepithelial squamous cell neoplasia, invasive squamous cell carcinoma, large cell carcinoma, leiomyosarcoma, a lentigo maligna melanoma, malignant melanoma, a malignant mesothelial tumor, medulloblastoma, medulloepithelioma, melanoma, meningeal, mesothelial, metastatic carcinoma, mucoepidermoid carcinoma, neuroblastoma, neuroepithelial adenocarcinoma nodular melanoma, oat cell carcinoma, oligodendroglial, osteosarcoma, pancreatic polypeptide, papillary serous adenocarcinoma,

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pineal cell, a pituitary tumor, plasmacytoma, pseudosarcoma, pulmonary
blastoma, renal cell carcinoma, retinoblastoma, rhabdomyosarcoma, sarcoma,
serous carcinoma, small cell carcinoma, a soft tissue carcinoma,
somatostatin-secreting tumor, squamous carcinoma, squamous cell
carcinoma, submesothelial, superficial spreading melanoma, undifferentiated
carcinoma, uveal melanoma, verrucous carcinoma, vipoma, a well
differentiated carcinoma, and Wilm's tumor.

5

88. The pharmaceutical composition of claim 47 wherein the composition is
10 provided as a separate component of a kit.

89. The pharmaceutical composition of claim 47 wherein the composition is
15 administered orally, rectally, topically, buccally, or parenterally.

15 90. The pharmaceutical composition of claim 47 wherein the composition is a
table, capsule, cachet, lozenge, dispensable powder, granule, solution,
suspension, emulsion or liquid.

91. The pharmaceutical composition of claim 47 wherein the selective COX-2
20 inhibiting agent is present in an amount from about 0.1 mg to about 10,000
mg.

25 92. The pharmaceutical composition of claim 47 wherein the DNA
topoisomerase I inhibiting agent is present in an amount from about 0.001
mg to about 10,000 mg.

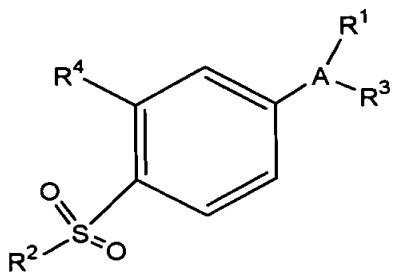
93. Use of a composition in preparation of a medicament useful in treating,
30 preventing or lowering the risk of developing a neoplasia disorder in a
mammal in need thereof, the composition comprising an amount of a DNA
topoisomerase I inhibiting agent and an amount of a COX-2 inhibiting agent
wherein the amount of the DNA topoisomerase I inhibiting agent and the

selective COX-2 inhibiting agent together make a neoplasia disorder effective amount.

94. The use of claim 93 wherein the DNA topoisomerase I inhibiting agent is selected from the group consisting of irinotecan; irinotecan hydrochloride; camptothecin; 9-aminocamptothecin; 9-nitrocamptothecin; 9-chloro-10-hydroxy camptothecin; topotecan; topotecan hydrochloride; lurtotecan; lurtotecan dihydrochloride; lurtotecan (liposomal); homosilatecans; 6,8-dibromo-2-methyl-3-[2-(D-xylopyranosylamino)phenyl]-4(3H)-quinazolinone; 2-cyano-3-(3,4-dihydroxyphenyl)-N-(phenylmethyl)-(2E)-2-propenamide; 2-cyano-3-(3,4-dihydroxyphenyl)-N-(3-hydroxyphenylpropyl)-(E)-2-propenamide; 5H-indolo[2,3-a]pyrrolo[3,4-c]carbazole-5,7(6H)-dione, 12-.beta.-D-glucopyranosyl-12,13-dihydro-2,10-dihydroxy-6-[[2-hydroxy-1-(hydroxymethyl)ethyl]amino]-; 4-acridinecarboxamide, N-[2-(dimethylamino)ethyl]-, dihydrochloride; and 4-acridinecarboxamide, N-[2-(dimethylamino)ethyl]-.

95. The use of claim 93 wherein the DNA topoisomerase I inhibiting agent is selected from the group consisting of irinotecan, irinotecan hydrochloride, camptothecin, 9-aminocamptothecin, 9-nitrocamptothecin, 9-chloro-10-hydroxy camptothecin, topotecan, topotecan hydrochloride, lurtotecan, lurtotecan dihydrochloride, lurtotecan (liposomal), and homosilatecans.

96. The use of claim 93 wherein the selective COX-2 inhibiting agent is selected from compounds of Formula 1:



or a pharmaceutically-acceptable salt or prodrug thereof,
wherein

A is a 5- or 6-member ring substituent selected from the group
consisting of heterocyclyl and carbocyclyl, wherein A is optionally
5 substituted with one or more radicals selected from the group consisting of
hydroxy, alkyl, halo, oxo, and alkoxy;

R¹ is selected from the group consisting of cyclohexyl, pyridinyl, and phenyl,
wherein R¹ is optionally substituted with one or more radicals selected from
the group consisting of alkyl, haloalkyl, cyano, carboxyl, alkoxycarbonyl,
10 hydroxyl, hydroxyalkyl, haloalkoxy, amino, alkylamino, phenylamino, nitro,
alkoxyalkyl, alkylsulfinyl, halo, alkoxy, and alkylthio;

R² is selected from the group consisting of alkyl and amino;

R³ is selected from the group consisting of halo, alkyl, alkenyl,
15 alkynyl, aryl, heteroaryl, oxo, cyano, carboxyl, cyanoalkyl, heterocyclyloxy,
alkyloxy, alkylthio, alkylcarbonyl, cycloalkyl, phenyl, haloalkyl, heterocyclo,
cycloalkenyl, phenylalkyl, heterocycloalkyl, alkylthioalkyl, hydroxyalkyl,
alkoxycarbonyl, phenylcarbonyl, phenylalkylcarbonyl, phenylalkenyl,
alkoxyalkyl, phenylthioalkyl, phenoxyalkyl, alkoxyphenylalkoxyalkyl,
alkoxycarbonylalkyl, aminocarbonyl, aminocarbonylalkyl,
20 alkylaminocarbonyl, N-phenylaminocarbonyl, N-alkyl-N-
phenylaminocarbonyl, alkylaminocarbonylalkyl, carboxyalkyl, alkylamino, N-
aryl amino, N-arylalkylamino, N-alkyl-N-arylalkylamino, N-alkyl-N-aryl amino,
aminoalkyl, alkylaminoalkyl, N-phenylaminoalkyl, N-phenylalkylaminoalkyl,
N-alkyl-N-phenylalkylaminoalkyl, N-alkyl-N-phenylaminoalkyl, phenoxy,
25 phenylalkoxy, phenylthio, phenylalkylthio, alkylsulfinyl, alkylsulfonyl,
aminosulfonyl, alkylaminosulfonyl, N-phenylaminosulfonyl, phenylsulfonyl,
and N-alkyl-N-phenylaminosulfonyl; and

R⁴ is selected from the group consisting of hydrido and halo.

30 97. The use of claim 96 wherein A is selected from the group consisting of
thienyl, oxazolyl, furyl, furanone, pyrrolyl, thiazolyl, imidazolyl, benzofuryl,

indenyl, benzothienyl, isoxazolyl, pyrazolyl, cyclopentenyl, cyclopentadienyl, benzindazolyl, cyclopentenone, benzopyranopyrazolyl, phenyl, and pyridyl.

98. The use of claim 97 wherein A is substituted with one or more radicals selected from the group consisting of alkyl, halo, oxo, hydroxy and alkoxy.

5

99. The use of claim 96 wherein R¹ is selected from the group consisting of cyclohexyl, pyridinyl, and phenyl, wherein cyclohexyl, pyridinyl, and phenyl are optionally substituted with one or more radicals selected from the group consisting of alkyl, haloalkyl, cyano, carboxyl, alkoxycarbonyl, hydroxyl, hydroxyalkyl, haloalkoxy, amino, alkylamino, phenylamino, nitro, alkoxyalkyl, alkylsulfinyl, alkoxy, halo, alkoxy, and alkylthio.

10

100. The use of claim 99 wherein R¹ is selected from the group consisting of pyridyl, cyclohexyl, and phenyl, wherein R¹ is optionally substituted with one or more radicals selected from the group consisting of alkyl, halo, and alkoxy.

15

101. The use of claim 96 wherein R² is selected from the group consisting of methyl and amino.

20

102. The use of claim 96 wherein R³ is selected from the group consisting of halo, alkyl, alkenyl, alkynyl, aryl, heteroaryl, oxo, hydroxyl, cyano, carboxyl, cyanoalkyl, heterocyclyloxy, alkyloxy, alkylthio, alkylcarbonyl, cycloalkyl, phenyl, haloalkyl, heterocyclo, cycloalkenyl, phenylalkyl, heterocyclylalkyl, alkylthioalkyl, hydroxyalkyl, alkoxycarbonyl, phenylcarbonyl, phenylalkylcarbonyl, phenylalkenyl, alkoxyalkyl, phenylthioalkyl, phenoxyalkyl, alkoxyphenylalkoxyalkyl, alkoxycarbonylalkyl, aminocarbonyl, aminocarbonylalkyl, alkylaminocarbonyl, N-phenylaminocarbonyl, N-alkyl-N-phenylaminocarbonyl, alkylaminocarbonyl-alkyl, carboxy-alkyl, alkylamino, N-arylalkylamino, N-alkyl-N-

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arylalkylamino, N-alkyl-N-arylarnino, amino-alkyl, alkylaminoalkyl, N-phenylamino-alkyl, N-phenyl-alkylaminoalkyl, N-alkyl-N-phenyl-alkylamino-alkyl, N-alkyl-N-phenylaminoalkyl, phenoxy, phenylalkoxy, phenylthio, phenylalkylthio, alkylsulfinyl, alkylsulfonyl, aminosulfonyl, alkylaminosulfonyl, N-phenylaminosulfonyl, phenylsulfonyl, and N-alkyl-N-phenylaminosulfonyl.

103. The use of claim 102 wherein R³ is a selected from the group consisting of halo, alkyl, cyano, carboxyl, alkyloxy, phenyl, haloalkyl, and hydroxyalkyl.

104. The use of claim 96 wherein the selective COX-2 inhibiting agent is selected from the group consisting of rofecoxib, celecoxib, valdecoxib, deracoxib, etoricoxib, 4-(4-cyclohexyl-2-methyloxazol-5-yl)-2-fluorobenzenesulfonamide, 5-chloro-3-(4-(methylsulfonyl)phenyl)-2-(methyl-5-pyridinyl)pyridine, 2-(3,5-difluorophenyl)-3-4-(methylsulfonyl)phenyl)-2-cyclopenten-1-one, N-[[4-(5-methyl-3-phenylisoxazol-4yl]phenyl]sulfonyl]propanamide, 4-[5-(4-chorophenyl)-3-(trifluoromethyl)-1H-pyrazole-1-yl]benzenesulfonamide, 3-(3,4-difluorophenoxy)-5,5-dimethyl-4-[4-(methylsulfonyl)phenyl]-2(5H)-furanone, N-[6-[(2,4-difluorophenyl)thio]-2,3-dihydro-1-oxo-1H-inden-5-yl]methanesulfonamide, 3-(4-chlorophenyl)-4-[4-(methylsulfonyl)phenyl]-2(3H)-oxazolone, 4-[3-(4-fluorophenyl)-2,3-dihydro-2-oxo-4-oxazolyl]benzenesulfonamide, 3-[4-(methylsulfonyl)phenyl]-2-phenyl-2-cyclopenten-1-one, 4-(2-methyl-4-phenyl-5-oxazolyl)benzenesulfonamide,

3-(4-fluorophenyl)-4-[4-(methylsulfonyl)phenyl]-2(3H)-oxazolone,
 5-(4-fluorophenyl)-1-[4-(methylsulfonyl)phenyl]-3-(trifluoromethyl)-1H-
 pyrazole,
 4-[5-phenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide,
 5 4-[1-phenyl-3-(trifluoromethyl)-1H-pyrazol-5-yl]benzenesulfonamide,
 4-[5-(4-fluorophenyl)-3-(trifluoromethyl)-1H-pyrazol-1-
 yl]benzenesulfonamide,
 N-[2-(cyclohexyloxy)-4-nitrophenyl]methanesulfonamide,
 N-[6-(2,4-difluorophenoxy)-2,3-dihydro-1-oxo-1H-inden-5-
 10 yl]methanesulfonamide,
 3-(4-chlorophenoxy)-4-[(methylsulfonyl)amino]benzenesulfonamide,
 3-(4-fluorophenoxy)-4-[(methylsulfonyl)amino]benzenesulfonamide,
 3-[(1-methyl-1H-imidazol-2-yl)thio]-4-[(methylsulfonyl)
 amino]benzenesulfonamide,
 15 5,5-dimethyl-4-[4-(methylsulfonyl)phenyl]-3-phenoxy-2(5H)-furanone,
 N-[6-[(4-ethyl-2-thiazolyl)thio]-1,3-dihydro-1-oxo-5-
 isobenzofuranyl]methanesulfonamide,
 3-[(2,4-dichlorophenyl)thio]-4-[(methylsulfonyl)amino] benzenesulfonamide,
 1-fluoro-4-[2-[4-(methylsulfonyl)phenyl]cyclopenten-1-yl]benzene,
 20 4-[5-(4-chlorophenyl)-3-(difluoromethyl)-1H-pyrazol-1-
 yl]benzenesulfonamide,
 3-[1-[4-(methylsulfonyl)phenyl]-4-(trifluoromethyl)-1H-imidazol-2-
 yl]pyridine,
 4-[2-(3-pyridinyl)-4-(trifluoromethyl)-1H-imidazol-1-
 25 yl]benzenesulfonamide,
 4-[5-(hydroxymethyl)-3-phenylisoxazol-4-yl]benzenesulfonamide,
 4-[3-(4-chlorophenyl)-2,3-dihydro-2-oxo-4-oxazolyl]benzenesulfonamide,
 4-[5-(difluoromethyl)-3-phenylisoxazol-4-yl]benzenesulfonamide,
 [1,1':2',1"-terphenyl]-4-sulfonamide,
 30 4-(methylsulfonyl)-1,1',2],1"-terphenyl,
 4-(2-phenyl-3-pyridinyl)benzenesulfonamide,

N-(2,3-dihydro-1,1-dioxido-6-phenoxy-1,2-benzisothiazol-5-yl)methanesulfonamide,

N-[3-(formylamino)-4-oxo-6-phenoxy-4H-1-benzopyran-7-yl]methanesulfonamide,

5 6-[[5-(4-chlorobenzoyl)-1,4—dimethyl-1H-pyrrol-2-yl]methyl]-3(2H)-pyridazinone, and

N-(4-nitro-2-phenoxyphenyl)methanesulfonamide.

105. The use of claim 104 wherein the selective COX-2 inhibiting agent is
10 rofecoxib.

106. The use of claim 104 wherein the selective COX-2 inhibiting agent is
celecoxib.

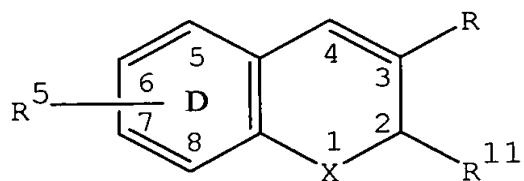
15 107. The use of claim 104 wherein the selective COX-2 inhibiting agent is
valdecoxib.

108. The use of claim 104 wherein the selective COX-2 inhibiting agent is
deracoxib.

20 109. The use of claim 104 wherein the selective COX-2 inhibiting agent is 4-(4-
cyclohexyl-2-methyloxazol-5-yl)-2-fluorobenzenesulfonamide.

110. The use of claim 104 wherein the selective COX-2 inhibiting agent is
25 etoricoxib.

111. The use of claim 93 wherein the selective COX-2 inhibiting agent is selected
from compounds of Formula 2:



or an isomer or pharmaceutically-acceptable salt or prodrug thereof,

5 wherein

X is selected from the group consisting of O, S and NR^a;

R^a is alkyl;

10 R is selected from the group consisting of carboxyl, alkyl, aralkyl, aminocarbonyl, alkylsulfonylaminocarbonyl and alkoxy carbonyl;

15 R¹¹ is selected from the group consisting of haloalkyl, alkyl, aralkyl, cycloalkyl and aryl, wherein aryl is optionally substituted with one or more radicals selected from the group consisting of alkylthio, nitro and alkylsulfonyl; and

20 R⁵ is one or more radicals independently selected from the group consisting of hydrido, halo, alkyl, aralkyl, alkoxy, aryloxy, heteroaryloxy, aralkyloxy, heteroaralkyloxy, haloalkyl, haloalkoxy, alkylamino, arylamino, aralkylamino, heteroaryl amino, heteroarylalkylamino, nitro, amino, aminosulfonyl, alkylaminosulfonyl, arylaminosulfonyl, heteroarylamino sulfonyl, aralkylaminosulfonyl, heteroaralkylaminosulfonyl, heterocyclosulfonyl, alkylsulfonyl, optionally substituted aryl, optionally substituted heteroaryl, aralkylcarbonyl, heteroarylcarbonyl, arylcarbonyl, aminocarbonyl, and alkylcarbonyl, wherein R⁵ together with ring D optionally forms a naphthyl radical.

25 112. The use of claim 111 wherein X is selected from the group consisting of O and S.

113. The use of claim 111 wherein R is selected from the group consisting of carboxyl, lower alkyl, lower aralkyl and lower alkoxy carbonyl.

114. The use of claim 113 wherein R is carboxyl.

5

115. The use of claim 111 wherein R¹¹ is selected from the group consisting of lower haloalkyl, lower cycloalkyl and phenyl.

116. The use of claim 115 wherein R¹¹ is lower haloalkyl.

10

117. The method of claim 115 wherein R¹¹ is selected from the group consisting of fluoromethyl, chloromethyl, dichloromethyl, trichloromethyl, pentafluoroethyl, heptafluoropropyl, difluoroethyl, difluoropropyl, dichloroethyl, dichloropropyl, difluoromethyl, and trifluoromethyl.

15

118. The use of claim 117 wherein R¹¹ is selected from the group consisting of trifluoromethyl and pentafluoroethyl.

119. The use of claim 111 wherein R⁵ is one or more radicals independently selected from the group consisting of hydrido, halo, lower alkyl, lower alkoxy, lower haloalkyl, lower haloalkoxy, lower alkylamino, nitro, amino, aminosulfonyl, lower alkylaminosulfonyl, 5- or 6- membered heteroarylalkylaminosulfonyl, lower aralkylaminosulfonyl, 5- or 6- membered nitrogen containing heterocyclosulfonyl, lower alkylsulfonyl, optionally substituted phenyl, lower aralkylcarbonyl, and lower alkylcarbonyl.

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120. The use of claim 119 wherein R⁵ is one or more radicals independently selected from the group consisting of hydrido, chloro, fluoro, bromo, iodo, methyl, ethyl, isopropyl, *tert*-butyl, butyl, isobutyl, pentyl, hexyl, methoxy,

ethoxy, isopropoxy, tertbutyloxy, trifluoromethyl, difluoromethyl, trifluoromethoxy, amino, N,N-dimethylamino, N,N-diethylamino, N-phenylmethylaminosulfonyl, N-phenylethylaminosulfonyl, N-(2-furylmethyl)aminosulfonyl, nitro, N,N-dimethylaminosulfonyl, aminosulfonyl, 5 N-methylaminosulfonyl, N-ethylsulfonyl, 2,2-dimethylethylaminosulfonyl, N,N-dimethylaminosulfonyl, N-(2-methylpropyl)aminosulfonyl, N-morpholinosulfonyl, methylsulfonyl, benzylcarbonyl, 2,2-dimethylpropylcarbonyl, phenylacetyl and phenyl.

10 121. The use of claim 120 wherein R⁵ is one or more radicals independently selected from the group consisting of hydrido, chloro, fluoro, bromo, iodo, methyl, ethyl, isopropyl, *tert*-butyl, methoxy, trifluoromethyl, trifluoromethoxy, N-phenylmethylaminosulfonyl, N-phenylethylaminosulfonyl, N-(2-furylmethyl)aminosulfonyl, N,N-dimethylaminosulfonyl, N-methylaminosulfonyl, N-(2,2-dimethylethyl)aminosulfonyl, dimethylaminosulfonyl, 15 2-methylpropylaminosulfonyl, N-morpholinosulfonyl, methylsulfonyl, benzylcarbonyl, and phenyl.

20 122. The use of claim 111 wherein the selective COX-2 inhibiting agent is selected from the group consisting of 6-chloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid, 6-chloro-7-methyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid, 6-chloro-8-(1-methylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid, 25 6-chloro-7-(1,1-dimethylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid, 6-chloro-8-(1-methylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid, 2-trifluoromethyl-3H-naphthopyran-3-carboxylic acid, 30 7-(1,1-dimethylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid, 6-bromo-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,

8-chloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
6-trifluoromethoxy-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
5,7-dichloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
8-phenyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
5 7,8-dimethyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid
6,8-bis(dimethylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
7-(1-methylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
7-phenyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
6-chloro-7-ethyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
10 6-chloro-8-ethyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
6-chloro-7-phenyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
6,7-dichloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
6,8-dichloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
2-trifluoromethyl-3H-naphtho[2,1-b]pyran-3-carboxylic acid,
15 6-chloro-8-methyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
8-chloro-6-methyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
8-chloro-6-methoxy-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
6-bromo-8-chloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
8-bromo-6-fluoro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
20 8-bromo-6-methyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
8-bromo-5-fluoro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
6-chloro-8-fluoro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
6-bromo-8-methoxy-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
6-[(phenylmethyl)amino]sulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-
25 carboxylic acid,
6-[(dimethylamino)sulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic
acid,
6-[(methylamino)sulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic
acid,
30 6-[(4-morpholino)sulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic
acid,

6-[(1,1-dimethylethyl)aminosulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,

6-[(2-methylpropyl)aminosulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,

5 6-methylsulfonyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,

8-chloro-6-[[phenylmethyl)amino]sulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,

6-phenylacetyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,

6,8-dibromo-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,

10 8-chloro-5,6-dimethyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,

6,8-dichloro-(S)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,

6-benzylsulfonyl-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,

6-[[N-(2-furylmethyl)amino]sulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,

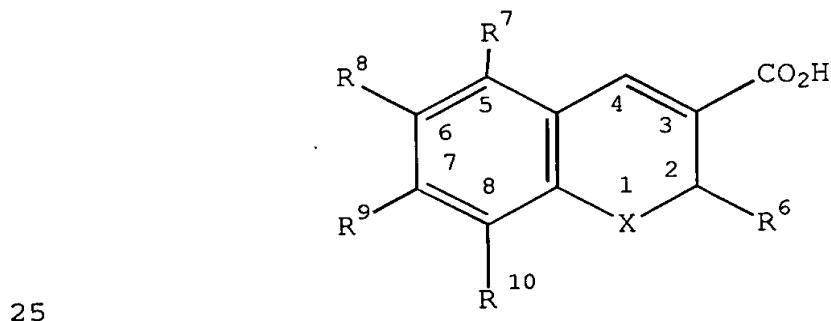
15 6-[[N-(2-phenylethyl)amino]sulfonyl]-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,

6-iodo-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,

7-(1,1-dimethylethyl)-2-pentafluoroethyl-2H-1-benzopyran-3-carboxylic acid, and

20 6-chloro-2-trifluoromethyl-2H-1-benzothiopyran-3-carboxylic acid.

123. The use of claim 93 wherein the selective COX-2 inhibiting agent is selected from compounds of Formula 3:



or an isomer or pharmaceutically-acceptable salt or prodrug thereof,
wherein

X is selected from the group consisting of O and S;

R⁶ is lower haloalkyl;

5 R⁷ is selected from the group consisting of hydrido and halo;

R⁸ is selected from the group consisting of hydrido, halo, lower alkyl,
lower haloalkoxy, lower alkoxy, lower aralkylcarbonyl, lower
dialkylaminosulfonyl, lower alkylaminosulfonyl, lower aralkylaminosulfonyl,
lower heteroaralkylaminosulfonyl, and 5- or 6- membered nitrogen
containing heterocyclosulfonyl;

10 R⁹ is selected from the group consisting of hydrido, lower alkyl, halo,
lower alkoxy, and aryl; and

R¹⁰ is selected from the group consisting of hydrido, halo, lower
alkyl, lower alkoxy, and aryl.

15

124. The use of claim 123 wherein R⁶ is selected from the group consisting of
trifluoromethyl and pentafluoroethyl.

20

125. The use of claim 123 wherein R⁷ is selected from the group consisting of
hydrido, chloro, and fluoro.

25

126. The use of claim 123 wherein R⁸ is selected from the group consisting of
hydrido, chloro, bromo, fluoro, iodo, methyl, tert-butyl, trifluoromethoxy,
methoxy, benzylcarbonyl, dimethylaminosulfonyl, isopropylaminosulfonyl,
methylaminosulfonyl, benzylaminosulfonyl, phenylethylaminosulfonyl,
methylpropylaminosulfonyl, methylsulfonyl, and morpholinosulfonyl.

127. The use of claim 123 wherein R^9 is selected from the group consisting of hydrido, methyl, ethyl, isopropyl, tert-butyl, chloro, methoxy, diethylamino, and phenyl.

5 128. The use of claim 123 wherein R^{10} is selected from the group consisting of hydrido, chloro, bromo, fluoro, methyl, ethyl, tert-butyl, methoxy, and phenyl.

10 129. The use of claim 123 wherein the selective COX-2 inhibiting agent is selected from the group consisting of 6-Chloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid, (S)-6-Chloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid, 6-Chloro-7-(1,1-dimethylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid, (S)-6-Chloro-7-(1,1-dimethylethyl)-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid, 6-Trifluoromethoxy-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid, (S)-6-Trifluoromethoxy-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid, 6-Formyl-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid, 6-(Difluoromethyl)-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid, 6,8-Dichloro-7-methyl-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid, 6,8-Dichloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid, (S)-6,8-Dichloro-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid, 6-Chloro-1,2-dihydro-2-(trifluoromethyl)-3-quinolinecarboxylic acid, (S)-6-chloro-1,2-dihydro-2-(trifluoromethyl)-3-quinolinecarboxylic acid, 6,8-Dichloro-1,2-dihydro-2-(trifluoromethyl)-3-quinolinecarboxylic acid, 7-(1,1-Dimethylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid, 6,7-Dichloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid, 5,6-Dichloro-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid,

2,6-Bis(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid,
5,6,7-Trichloro-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid,
6,7,8-Trichloro-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid,
6-Iodo-1,2-dihydro-2-(trifluoromethyl)-3-quinolinecarboxylic acid,
5 6-Bromo-1,2-dihydro-2-(trifluoromethyl)-3-quinolinecarboxylic acid,
6-Chloro-7-methyl-2-(trifluoromethyl)-2H-1-benzothiopyran-3-carboxylic
acid, and
6,8-Dichloro-2-trifluoromethyl-2H-1-benzothiopyran-3-carboxylic acid.

10 130. The use of claim 129 wherein the selective COX-2 inhibiting agent is selected from the group consisting of
6-Chloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
(S)-6-Chloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
6-Chloro-7-(1,1-dimethylethyl)-2-trifluoromethyl-2H-1-benzopyran-3-
15 carboxylic acid,
(S)-6-Chloro-7-(1,1-dimethylethyl)-2-(trifluoromethyl)-2H-1-benzopyran-3-
carboxylic acid,
6-Trifluoromethoxy-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
(S)-6-Trifluoromethoxy-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic
20 acid,
6-Formyl-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid,
6-(Difluoromethyl)-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid,
6,8-Dichloro-7-methyl-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic
acid,
25 6,8-Dichloro-2-trifluoromethyl-2H-1-benzopyran-3-carboxylic acid,
(S)-6,8-Dichloro-2-(trifluoromethyl)-2H-1-benzopyran-3-carboxylic acid,
6-Chloro-1,2-dihydro-2-(trifluoromethyl)-3-quinolinecarboxylic acid,
(S)-6-chloro-1,2-dihydro-2-(trifluoromethyl)-3-quinolinecarboxylic acid, and
6,8-Dichloro-1,2-dihydro-2-(trifluoromethyl)-3-quinolinecarboxylic acid.

131. The use of claim 93 wherein the selective COX-2 inhibiting agent is selected from compounds that correspond in structure, and pharmaceutically acceptable salts thereof, of the group consisting of:

N-(2,3-dihydro-1,1-dioxido-6-phenoxy-1,2-benzisothiazol-5-yl)methanesulfonamide,
5 6-[[5-(4-chlorobenzoyl)-1,4—dimethyl-1H-pyrrol-2-yl]methyl]-3(2H)-pyridazinone,
N-(4-nitro-2-phenoxyphenyl)methanesulfonamide,
10 3-(3,4-difluorophenoxy)-5,5-dimethyl-4-[4-(methylsulfonyl)phenyl]-2(5H)-furanone,
N-[6-[(2,4-difluorophenyl)thio]-2,3-dihydro-1-oxo-1H-inden-5-yl]methanesulfonamide,
N-[2-(cyclohexyloxy)-4-nitrophenyl]methanesulfonamide,
15 N-[6-(2,4-difluorophenoxy)-2,3-dihydro-1-oxo-1H-inden-5-yl]methanesulfonamide,
3-(4-chlorophenoxy)-4-[(methylsulfonyl)amino]benzenesulfonamide,
3-(4-fluorophenoxy)-4-[(methylsulfonyl)amino]benzenesulfonamide,
3-[(1-methyl-1H-imidazol-2-yl)thio]-4 [(methylsulfonyl)amino]benzenesulfonamide,
20 5,5-dimethyl-4-[4-(methylsulfonyl)phenyl]-3-phenoxy-2(5H)-furanone,
N-[6-[(4-ethyl-2-thiazolyl)thio]-1,3-dihydro-1-oxo-5-isobenzofuranyl]methanesulfonamide,
3-[(2,4-dichlorophenyl)thio]-4-[(methylsulfonyl)amino]benzenesulfonamide,
N-(2,3-dihydro-1,1-dioxido-6-phenoxy-1,2-benzisothiazol-5-yl)methanesulfonamide, and
25 N-[3-(formylamino)-4-oxo-6-phenoxy-4H-1-benzopyran-7-yl]methanesulfonamide.

132. The use of claim 93 wherein the neoplasia disorder is selected from the
30 group consisting of a lung, a breast, a skin, a stomach, an intestine, an

esophagus, a bladder, a head, a neck, a brain, a cervical, and an ovary neoplasia disorder.

133. The use of claim 93 wherein the neoplasia disorder is selected from the
5 group consisting of acral lentiginous melanoma, an actinic keratosis,
adenocarcinoma, adenoid cystic carcinoma, an adenoma, adenosarcoma,
adenosquamous carcinoma, an astrocytic tumor, bartholin gland carcinoma,
basal cell carcinoma, a bronchial gland carcinoma, capillary carcinoma, a
carcinoid, carcinoma, carcinosarcoma, cavernous carcinoma,
10 cholangiocarcinoma, chondrosarcoma, choriod plexus papilloma, choriod
plexus carcinoma, clear cell carcinoma, cystadenoma, endodermal sinus
tumor, endometrial hyperplasia, endometrial stromal sarcoma, endometrioid
adenocarcinoma, ependymal carcinoma, epitheloid carcinoma, Ewing's
15 sarcoma, fibrolamellar, focal nodular hyperplasia, gastrinoma, a germ cell
tumor, glioblastoma, glucagonoma, hemangiblastoma,
hemangioendothelioma, a hemangioma, hepatic adenoma, hepatic
adenomatosis, hepatocellular carcinoma, insulinoma, intraepithelial neoplasia,
interepithelial squamous cell neoplasia, invasive squamous cell carcinoma,
large cell carcinoma, leiomyosarcoma, a lentigo maligna melanoma,
20 malignant melanoma, a malignant mesothelial tumor, medulloblastoma,
medulloepithelioma, melanoma, meningeal, mesothelial, metastatic
carcinoma, mucoepidermoid carcinoma, neuroblastoma, neuroepithelial
adenocarcinoma nodular melanoma, oat cell carcinoma, oligodendroglial,
osteosarcoma, pancreatic polypeptide, papillary serous adenocarcinoma,
25 pineal cell, a pituitary tumor, plasmacytoma, pseudosarcoma, pulmonary
blastoma, renal cell carcinoma, retinoblastoma, rhabdomyosarcoma, sarcoma,
serous carcinoma, small cell carcinoma, a soft tissue carcinoma,
somatostatin-secreting tumor, squamous carcinoma, squamous cell
carcinoma, submesothelial, superficial spreading melanoma, undifferentiated
30 carcinoma, uveal melanoma, verrucous carcinoma, vipoma, a well
differentiated carcinoma, and Wilm's tumor.

134. The method of claim 93 wherein the selective COX-2 inhibiting agent and the DNA topoisomerase I inhibiting agent are formulated in a single composition.

5 135. The use of claim 93 wherein the selective COX-2 inhibiting agent and the DNA topoisomerase I inhibiting agent are provided as a separate component of a kit.

10 136. The use of claim 93 wherein the mammal is a human.

137. The use of claim 93 wherein the selective COX-2 inhibiting agent and the DNA topoisomerase I inhibiting agent are administered in a sequential manner.

15 138. The use of claim 93 wherein the selective COX-2 inhibiting agent and the DNA topoisomerase I inhibiting agent are administered in a substantially simultaneous manner.

20 139. A kit comprising a DNA topoisomerase I inhibiting agent and a selective COX-2 inhibiting agent wherein the DNA topoisomerase I inhibiting agent and the selective COX-2 inhibiting agent together make a neoplasia disorder effective amount.

25 140. A method for the prevention or treatment of DNA topoisomerase I inhibiting agent-related diarrhea in a subject in need of such prevention or treatment wherein the method comprises administering to the subject a diarrhea preventing or treating-effective amount of a source of a COX-2 inhibitor, thereby preventing or treating the DNA topoisomerase I inhibiting agent-related diarrhea.

30

141. The method of Claim 140 wherein the source of a COX-2 inhibiting agent is
a source of a COX-2 selective inhibiting agent.

142. The method of Claim 141 wherein the source of a COX-2 selective inhibiting
5 agent is a COX-2 selective inhibiting agent.

143. The method of Claim 142 wherein the COX-2 selective inhibiting agent is
selected from the group consisting of celecoxib, valdecoxib, deracoxib,
rofecoxib, etoricoxib, meloxicam, and ABT-963.

10 144. The method of Claim 142 wherein the COX-2 selective inhibiting agent is
celecoxib.

145. The method of Claim 142 wherein the COX-2 selective inhibiting agent is
15 valdecoxib.

146. The method of Claim 142 wherein the COX-2 selective inhibiting agent is
deracoxib.

20 147. The method of Claim 142 wherein the COX-2 selective inhibiting agent is
rofecoxib.

148. The method of Claim 142 wherein the COX-2 selective inhibiting agent is
etoricoxib.

25 149. The method of Claim 142 wherein the COX-2 selective inhibiting agent is
meloxicam.

150. The method of Claim 142 wherein the COX-2 selective inhibiting agent is
30 ABT-963.

151. The method of Claim 142 wherein the COX-2 selective inhibiting agent is a chromene COX-2 selective inhibiting agent.

152. The method of Claim 141 wherein the source of a COX-2 selective inhibiting agent is a prodrug of a COX-2 selective inhibiting agent.

5 153. The method of Claim 152 wherein the prodrug of a COX-2 inhibiting agent is parecoxib.

10 154. The method of Claim 140 wherein the DNA topoisomerase I inhibiting agent is selected from the group consisting of:
irinotecan;
irinotecan hydrochloride;
camptothecin;
15 9-aminocamptothecin;
9-nitrocamptothecin;
9-chloro-10-hydroxy camptothecin;
topotecan;
lurtotecan;
20 a homosilatecan;
6,8-dibromo-2-methyl-3-[2-(D-xylopyranosylamino)phenyl]-4(3H)-
quinazolinone;
2-cyano-3-(3,4-dihydroxyphenyl)-N-(phenylmethyl)-(2E)-2-
propenamide;
25 2-cyano-3-(3,4-dihydroxyphenyl)-N-(3-hydroxyphenylpropyl)-(E)-2-
propenamide;
12-beta-D-glucopyranosyl-12,13-dihydro-2,10-dihydroxy-6-[[2-
hydroxy-1-(hydroxymethyl)ethyl]amino]-5H-indolo[2,3-
a]pyrrolo[3,4-c]carbazole-5,7(6H)-dione;
30 N-[2-(dimethylamino)ethyl]-4-acridinecarboxamide, dihydrochloride;
and

N-[2-(dimethylamino)ethyl]-4-acridinecarboxamide;
or a salt of the DNA topoisomerase I inhibiting agent.

155. The method of Claim 154 wherein the DNA topoisomerase I inhibiting
5 agent is selected from the group consisting of irinotecan, rubitecan,
lurtotecan, exetecan mesylate, karenitecan, and silatecan;
or a salt thereof.

156. The method of Claim 155 wherein the DNA topoisomerase I inhibiting agent
10 is irinotecan or a salt thereof.

157. The method of Claim 156 wherein the source of a COX-2 inhibiting agent is
a source of a COX-2 selective inhibiting agent.

158. The method of Claim 157 wherein the source of the COX-2 inhibiting agent
15 is selected from the group consisting of celecoxib, valdecoxib, deracoxib,
rofecoxib, etoricoxib, meloxicam, and ABT-963.

159. The method of Claim 158 wherein the source of the COX-2 inhibiting agent
20 is celecoxib.

160. The method of Claim 158 wherein the source of the COX-2 inhibiting agent
is valdecoxib.

161. The method of Claim 158 wherein the source of the COX-2 inhibiting agent
25 is deracoxib.

162. The method of Claim 158 wherein the source of the COX-2 inhibiting agent
is rofecoxib.

163. The method of Claim 158 wherein the source of the COX-2 inhibiting agent is etoricoxib.

164. The method of Claim 158 wherein the source of the COX-2 inhibiting agent is meloxicam.

165. The method of Claim 158 wherein the source of the COX-2 inhibiting agent is ABT-963.

166. The method of Claim 157 wherein the source of a COX-2 selective inhibiting agent is a chromene COX-2 selective inhibiting agent.

167. The method of Claim 157 wherein the source of a COX-2 selective inhibiting agent is a prodrug of a COX-2 selective inhibiting agent.

168. The method of Claim 167 wherein the produrg of a COX-2 selective inhibiting agent is parecoxib.

169. The method of Claim 155 wherein the DNA topoisomerase I inhibiting agent is ribitecan or a salt thereof.

170. The method of Claim 155 wherein the DNA topoisomerase I inhibiting agent is lurutotecan or a salt thereof.

171. The method of Claim 155 wherein the DNA topoisomerase I inhibiting agent is exetecan mesylate.

172. The method of Claim 155 wherein the DNA topoisomerase I inhibiting agent is karenitecan or a salt thereof.

173. The method of Claim 155 wherein the DNA topoisomerase I inhibiting agent is silatecan or a salt thereof.

174. The method of Claim 141 wherein the source of a COX-2 selective inhibiting agent is administered to the subject orally.

5 175. The method of Claim 141 wherein the source of a COX-2 selective inhibiting agent is administered to the subject parenterally.

10 176. The method of Claim 175 wherein the source of the COX-2 selective inhibiting agent is administered to the subject intravenously.

177. The method of Claim 141 wherein the source of the COX-2 selective inhibiting agent is administered to the subject transdermally.

15 178. The method of Claim 141 wherein the source of the COX-2 selective inhibiting agent is administered to the subject rectally.

179. The method of Claim 141 wherein the source of the COX-2 selective inhibiting agent is administered to the subject before treating the subject with the DNA topoisomerase I inhibiting agent.

20 180. The method of Claim 141 wherein the source of the COX-2 selective inhibiting agent is administered to the subject concurrently with treating the subject with the DNA topoisomerase I inhibiting agent.

25 181. The method of Claim 141 wherein the source of the COX-2 selective inhibiting agent is administered to the subject after treating the subject with the DNA topoisomerase I inhibiting agent.